

Comparing alternatives

Table 2-2. Comparing how the alternatives address the issues

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
<u>Issue: Effect on over-the-snow winter recreation</u>				
Ability to expand groomed routes				
Grooming could expand under direction in existing plans ♦ Grooming levels were stable during the 1990s & are not likely to increase during the next 5 years due to increased costs of machinery & operations, & no increases in funding from states	Grooming could expand on about 3,500 miles of designated ungroomed routes, except additional grooming limited ♦ On designated ungroomed routes on the Flathead, Gallatin, Targhee & Ashley NF & the Upper Columbia/Salmon BLM unit, because most designated routes are currently groomed	Grooming could expand ♦ On about 3,500 miles of designated ungroomed routes ♦ In areas of consistent snow compaction	Same as Alternative C	Same as Alternative C
Ability to expand designated routes				
♦ Designated ungroomed routes could expand based on existing plan direction ♦ For outfitter-guide permits, changes in season of use are possible, but there's little ability to expand because of permitting process	♦ New designated routes would not be allowed above what exists today ♦ For outfitter-guide permits, changes in season of use would be limited ♦ For outfitter-guide permits, little ability to expand would be found anyway because of permitting process	♦ New designated routes would be allowed in areas of consistent snow compaction ♦ For outfitter-guide permits, changes in season of use would be possible in areas of consistent snow compaction, but there's little ability to expand because of permitting process	Same as Alternative C	Same as Alternative C

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effect on over-the-snow recreation				
No change in over-the-snow winter recreation	<ul style="list-style-type: none"> ♦ Present opportunities would continue to exist ♦ In the few units where grooming cannot expand, user experience may change ♦ Outfitters could not expand winter operations into new areas 	<ul style="list-style-type: none"> ♦ Present opportunities would continue to exist ♦ All units would be able to provide more groomed routes & opportunities, so user experience should not change ♦ Outfitters could expand services into some new areas 	Same as Alternative C	Same as Alternative C

Comparing how the alternatives address the issue

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<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
<u>Issue: Effects on wildland fire risk to communities</u>				
Limits imposed on fuel treatments that reduce winter snowshoe hare habitat				
Direction in existing plans	Precommercial thinning allowed only ♦ Within 200 feet of structures	Fuel treatment projects allowed only ♦ Within 200 feet of structures	Fuel treatment projects allowed only ♦ Within 200 feet of structures ♦ When a broad scale assessment finds different historic forage levels ♦ To maintain or improve foraging habitat in the long term	Direction in existing plans
Ability to conduct fuel treatments outside winter snowshoe hare habitat				
Direction in existing plans	Standards VEG S1 through VEG S4 could limit fuel treatment in some circumstances – most projects could be designed to meet the standards			Direction in existing plans
Percent of fuel treatment program inside the WUI that may need to be relocated during next decade due Standards VEG S5 & VEG S6				
None	♦ 5% in high density forests ♦ 4% in low density forests	♦ 10% in high density forests ♦ 9% in low density forests	♦ Less than Alternative C ♦ Less than Alternative C	None
Percent of fuel treatment program outside the WUI that may need to be relocated during next decade due Standards VEG S5 & VEG S6				
None	♦ 8% in high density forests ♦ 7% in low density forests	♦ 17% in high density forests ♦ 13% in low density forests	♦ Less than Alternative C ♦ Less than Alternative C	None
Effect on wildland fire risk				
No change	♦ Constrains only fuel treatments that use precommercial thinning ♦ Could displace 6-11% of the fuel treatment program ♦ May limit ability to reduce fire size and intensity in some places	♦ Constrains fuel treatments ♦ Could displace 12-22% of the fuel treatment program ♦ Likely to limit ability to reduce fire size and intensity in some places	♦ Constrains fuel treatments ♦ Could displace 12-22% of the fuel treatment program ♦ Likely to limit ability to reduce fire size and intensity in some places	♦ Would not constrain fuel treatment ♦ Would not limit ability to reduce fire size and intensity

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
<u>Issue: Effects on maintaining winter snowshoe hare habitat in multistoried forests</u>				
Activities allowed in lynx foraging habitat in multistoried forests outside wilderness				
Direction in existing plans	Vegetation management projects other than precommercial thinning ♦ But precommercial thinning permitted within 200 feet of structures	Only vegetation management projects ♦ Within 200 feet of structures or for research	Only vegetation management projects ♦ Within 200 feet of structures or for research ♦ To restore planted white pine, western larch, ponderosa pine & whitebark pine where 80% of the forage habitat is retained ♦ To restore whitebark pine ♦ To develop future old growth lodgepole pine ♦ When a broad scale assessment finds different historic forage levels ♦ To maintain or improve foraging habitat in the long term	Vegetation management projects ♦ To maintain or improve foraging habitat in the long term ♦ Where there is rationale to deviate from the guideline
Effect on winter snowshoe hare habitat in multistoried forests outside wilderness				
May be reduced by 4-5%	May be reduced by 3-4%	No reduction, forage habitat maintained	May be reduced by 2-3%, plus some habitat improved.	May be reduced by 4-5% plus some habitat improved

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<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Issue: Effect on the ability to restore tree species and forest structures in decline				
Ability to precommercially thin young regenerating forests to maintain or restore tree species in decline				
Direction in existing plans	Only when stands no longer provide foraging habitat, or ♦ Within 200 feet of structures	Same as Alternative B, plus ♦ Research & genetic tests	Same as Alternative C, plus ♦ Daylight thinning around planted white pine, western larch & ponderosa pine retaining 80% of forage habitat ♦ Restoring whitebark pine & aspen ♦ Thinning lodgepole pine to promote future old growth ♦ When a broad scale assessment finds different historic forage levels	Same as Alternative C, plus ♦ Fuel treatments developed through a collaborative process

How much precommercial thinning could be done

	<u>Alternative A</u>		<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
<u>Reason for precommercial thinning</u>	<u>Outside lynx habitat</u>	<u>Inside lynx habitat</u>	<u>Inside lynx habitat</u>	<u>Inside lynx habitat</u>	<u>Inside lynx habitat</u>	<u>Inside lynx habitat</u>
Research	80 acres	1,450 acres	0	1,450 acres	1,450 acres	1,450 acres
Genetic tests	320 acres	220 acres	0	220 acres	220 acres	220 acres
Within 200 feet of dwellings	4,170 acres	2,190 acres	2,190 acres	2,190 acres	2,190 acres	2,190 acres
Restoration †	123,080 acres	232,620 acres	0	0	232,210 acres	0
Western white pine	19,610 acres	51,090 acres	0	0	51,090 acres	0
Whitebark pine	250 acres	9,110 acres	0	0	9,110 acres	0
Aspen	3,070 acres	3,050 acres	0	0	3,050 acres	0
Ponderosa pine	48,450 acres	11,660 acres	0	0	11,660 acres	0
Larch	45,280 acres	123,160 acres	0	0	123,160 acres	0
Lodgepole	6,420 acres	34,550 acres	0	0	34,550 acres	0
Other	57,170 acres	159,660 acres	0	0	0	0
Total thinning ‡	184,820 acres	396,140 acres	2,190 acres	3,860 acres	236,480 acres	3,860 acres

† Restoration = western white pine + whitebark pine + aspen + ponderosa pine + larch + lodgepole

‡ Total thinning = research + genetics + within 200' of dwellings + restoration + other over ten years

Acres shown are total thinning-program request – it's likely historic average funding would be received to do only about 30% of what's requested

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Precommercial thinning deferred by amendment during next decade, based on historic average funding of about 34% of what's requested				
No deferral	132,000 acres	Same as Alternative B	56,000 acres	Same as Alternative B
Effect on tree species in decline				
<ul style="list-style-type: none"> ♦ Data collected for research & tree improvement ♦ Contributes to improving conditions for whitebark pine & aspen ♦ Contributes to improving conditions for western white pine, western larch, ponderosa pine & old growth lodgepole 	<ul style="list-style-type: none"> ♦ No data collected for research & tree improvement ♦ Contributes to continued decline of western white pine, whitebark pine, aspen, western larch & ponderosa pine ♦ Contributes to decrease in old growth lodgepole pine 	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ Data is collected for research & tree improvement 	<ul style="list-style-type: none"> ♦ Data collected for research & tree improvement ♦ Contributes to improving conditions for whitebark pine & aspen ♦ Contributes to improving conditions for western white pine, western larch, ponderosa pine & old growth lodgepole 	<p>Same as Alternative C, except</p> <ul style="list-style-type: none"> ♦ May contribute to improving conditions for whitebark pine and aspen if they are treated to restore fire-adapted ecosystems

Comparing how the alternatives address the issue

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
<u>Issue: What level of management direction should be applied to activities that the FWS remand notice found were not a threat to lynx populations?</u>				
Nature of management direction applied to grazing, minerals, roads & over-the-snow recreation				
None	<ul style="list-style-type: none"> ♦ Grazing Objective GRAZ 01 Standards GRAZ S1 - GRAZ S4 Standard LINK S2 	Same as Alternative B	Same as Alternative B	Objective GRAZ 01 Guidelines GRAZ G1 - G4 Guideline LINK G2
None	<ul style="list-style-type: none"> ♦ Minerals Objective HU 05 Standard HU S3 Guidelines HU G4 & HU G5 	Same as Alternative B	Same as Alternative B	Objective HU 05 Guidelines HU G4, HU G5 & HU G12
None	<ul style="list-style-type: none"> ♦ Roads Guidelines HU G6 - HU G9 	Same as Alternative B	Same as Alternative B	Same as Alternative B
None	<ul style="list-style-type: none"> ♦ Over-the-snow recreation Objective HU 01 Standards HU S1 & HU S3 	Same as Alternative B	Same as Alternative B	Objective HU 01 Guidelines HU G11 & HU G12

Table 2-3. Comparing how management concerns are addressed in the alternatives

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Management concern: Size of area to which Standard VEG SI is applied – Standard VEG SI limits the amount of unsuitable habitat to 30%			
Applies to an LAU, about 16,000 to 25,000 acres – this size makes it difficult to consider natural disturbance processes because they often involve larger areas	Applies to multiple contiguous LAUs – more closely resembles the scale of many natural disturbances	Applies to sub-basin or isolated mountain range, about 500,000 to one million acres – this size about the scale of many natural disturbances	Same as Alternative C
Management concern: Standards that focus on particular methods, such as timber harvest & salvage logging			
Standards VEG S2, VEG S4, VEG S5 & VEG S6	Standard VEG S4	None of the standards	None of the standards
Management concern: Guidelines that focus on methods such as timber harvest & salvage logging			
None	Guideline VEG G6	Guideline VEG G7	Same as Alternative D
Management concern: How denning habitat is considered			
If less than 10% denning habitat, then ♦ Defer projects in potential denning habitat	Same as Alternative B	If less than 10% denning habitat, then ♦ Defer projects in potential denning habitat, or ♦ Leave enough standing trees & coarse woody debris to provide den sites	Same as Alternative D, only ♦ Fuel treatments don't have to meet 10% denning standard
Management concern: Size of area for Standard HUSI over-the-snow routes			
LAU this size makes it difficult to consider entire routes because they often involve larger areas	By LAU, or a combination of immediately adjacent LAUs	Same as Alternative C	Same as Alternative C
Management concern: How lynx diurnal habitat is considered			
Standard	Guideline	Same as Alternative C	Same as Alternative C
Management concern: How upgrading roads is considered			
Guideline to avoid upgrading or paving roads	Guideline to avoid or reduce effects on lynx when upgrading or paving roads	Same as Alternative C	Same as Alternative C

Comparing how management concerns are addressed in alternatives

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Management concern: How adaptive management is incorporated			
The 30% unsuitable habitat limit in Standard VEG S1 could be changed based on a broad scale assessment	Same as Alternative B	Same as Alternative B, plus ♦ Standards VEG S5 and VEG S6 would allow precommercial thinning if a broad scale assessment finds different historic forage levels ♦ Standard ALL S2 would allow projects to proceed if they have no adverse effects on lynx	Same as Alternative B, plus ♦ Standard ALL S2 would allow projects to proceed if they have no adverse effects on lynx, <u>or</u> projects that may adversely affect lynx in the short term but have beneficial effects in the long term

Table 2-4. Comparing how the LCAS risk factors are addressed in the Alternatives

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
LCAS risk factor: Amount of lynx habitat in unsuitable condition				
Most FS & BLM plans contain limited or no direction	<ul style="list-style-type: none"> ♦ Standard VEG S1 limits unsuitable habitat to 30% per LAU unless a broad scale assessment finds different historic levels ♦ Standard VEG S2 limits how much unsuitable habitat can be created by timber harvest to 15% of an LAU over a 10-year period ♦ Standard ALL S1 requires vegetation management projects to maintain connectivity ♦ Guideline VEG G1 encourages creating foraging habitat where it's lacking 	<ul style="list-style-type: none"> ♦ Standard VEG S1 limits unsuitable habitat to 30% per combination of adjacent LAUs unless a broad scale assessment finds different historic levels ♦ Standard VEG S2 changes to Guideline VEG G6 ♦ Changes Guideline VEG G1 to identify forest conditions to target for creating forage habitat 	<ul style="list-style-type: none"> ♦ Standard VEG S1 limits unsuitable habitat to 30% per sub-basin or isolated mountain range unless a broad scale assessment finds different historic levels ♦ Drops Standard VEG S2, so no restrictions on how much unsuitable habitat can be created by timber harvest ♦ Guideline VEG G1 same as Alternative C 	<p>Same as Alternative C, only</p> <ul style="list-style-type: none"> ♦ Standard VEG S1 would not apply to fuel treatment ♦ Standard VEG S2 dropped, same as Alternative D
LCAS risk factor: Denning habitat				
<ul style="list-style-type: none"> ♦ Most plans contain some direction for keeping dead & down material ♦ Management direction inadequate or lacking in three FS & most BLM plans 	<ul style="list-style-type: none"> ♦ Standard VEG S3 requires retaining 10% denning habitat; if less, projects in potential denning habitat deferred ♦ Standard VEG S4 prohibits salvage after a disturbance kills trees in patches smaller than five acres; unless there is 10% denning habitat, or in developed recreation sites, administrative sites or authorized special use structures or improvements; or in designated road or trail corridors where public safety or access may be compromised ♦ Guideline VEG G2 encourages creating denning habitat where it's lacking ♦ Guideline VEG G3 says to restore or retain denning habitat where it's less likely to burned by wildfire 	<p>Same as Alternative B, plus</p> <ul style="list-style-type: none"> ♦ Standard VEG S4 allows salvage logging within 200 feet of structures, dwellings or outbuildings 	<p>Standard VEG S3 same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ Allows projects to move towards 10% denning habitat by leaving standing trees & coarse woody debris – Guideline VEG G2 incorporated ♦ Standard VEG S4 changed to Guideline VEG G7, so consider no salvage harvest in patches smaller than five acres if less than 10% denning per LAU 	<p>Same as Alternative D, only</p> <ul style="list-style-type: none"> ♦ Standard VEG S3 does not apply to fuel treatment

Comparing how the LCAS risk factors are addressed in the alternatives

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<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
LCAS risk factor: Lynx foraging habitat (winter snowshoe hare habitat)				
Most FS & BLM plans contain limited or no direction, except for old growth in multistoried stages ♦ Could reduce high density forage by 14% ♦ Could reduce total forage by 9%	Standards VEG S5 & VEG S6 defer precommercial thinning in foraging habitat Other treatments: ♦ Could reduce high density forage by 3% ♦ Could reduce total forage by 2%	Standards VEG S5 & VEG S6 defer all vegetation management in foraging habitat, but allows ♦ Research ♦ Within 200 feet of structures ♦ Could reduce high density forage by less than 1% ♦ Could reduce total forage by less than 1%	Standards VEG S5 & VEG S6 defers vegetation management in foraging habitat, but allows ♦ Research ♦ Within 200 feet of structures ♦ Restoring western larch, ponderosa pine & planted western white pine, where 80% of the forage is retained ♦ Whitebark pine restoration ♦ Promoting lodgepole pine old growth ♦ When a broad scale assessment has found forage exceeds its historic availability ♦ Aspen restoration in stand initiation stage ♦ Improving or maintaining long-term foraging habitat in multistoried stages ♦ Could reduce high density forage by 8% ♦ Could reduce total forage by 4%	Same as Alternative B, only ♦ Standard VEG S5 would not apply to fuel treatments or research ♦ Standard VEG S6 changed to less-restrictive Guideline VEG G8 ♦ Could reduce high density forage by 5% ♦ Could reduce total forage by 4%

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
LCAS risk factor: Wildland fire management				
Most FS & BLM plans contain limited or no direction	<ul style="list-style-type: none"> ♦ Objective VEG O3 says to conduct fire use activities to restore ecological processes & maintain or improve lynx habitat ♦ Vegetation standards would not require suppressing fires or apply to wildland fire use ♦ Guideline VEG G4 says permanent travel routes should avoid facilitating snow compaction, and permanent firebreaks should avoid ridges or saddles 	Same as Alternative B	Same as Alternative B	Same as Alternative B
LCAS risk factor: Winter recreation				
Most FS & BLM plans contain limited or no direction	<ul style="list-style-type: none"> ♦ Standard HU S1 says no net-increase allowed in groomed or designated over-the-snow routes per LAU unless consolidating use or improving lynx habitat ♦ Standard HU S2 says when developing or expanding ski areas, locate routes & access roads to maintain & provide lynx diurnal security habitat ♦ Standard HU S3 restricts over-the-snow access for non-recreation special uses, timber sales, etc., to designated routes ♦ Standard ALL S1 says new or expanded developments must maintain habitat connectivity ♦ Includes Guidelines HU G1, HU G2 & HU G3 that require considering lynx habitat & movement needs 	<p>Same as Alternative B, however</p> <ul style="list-style-type: none"> ♦ Standard HU S1 says no net-increase in groomed or designated over-the-snow routes allowed per combination of adjacent LAUs, unless consolidating use, improving lynx habitat or in areas of consistent snow compaction ♦ Standard HU S2 changed to less-restrictive Guideline HU G10 	Same as Alternative C	<p>Similar to Alternative C</p> <ul style="list-style-type: none"> ♦ Standard HU S1 changed to less-restrictive Guideline HU G11, which says use should not expand ♦ Standard HU S3 changed to less-restrictive Guideline HU G12

Comparing how the LCAS risk factors are addressed in the alternatives

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<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
LCAS risk factor: Highways				
Most FS & BLM plans contain limited or no direction	<ul style="list-style-type: none"> ♦ Standard LINK S1 says within linkage areas, potential highway crossings must be identified when construction or reconstruction is proposed ♦ Guideline ALL G1 encourages avoiding or reducing effects on lynx when constructing or reconstructing highways and forest highways 	Same as Alternative B	Same as Alternative B	Same as Alternative B
LCAS risk factor: Forest & backcountry roads				
Some FS & BLM plans contain direction which may conserve lynx, but others contain little or no direction	<ul style="list-style-type: none"> ♦ Guideline HU G6 discourages upgrading & paving roads in lynx habitat where increases in human activity would result ♦ Guideline HU G7 discourages building permanent roads on ridge-tops & saddles ♦ Guideline HU G8 discourages cutting brush along low-speed, low-traffic roads ♦ Guideline HU G9 encourages restricting public motorized use on new roads built to access projects & decommissioning new roads not needed for other reasons 	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ Guideline HU G6 encourages avoiding or reducing effects on lynx when upgrading & paving roads in lynx habitat where increases in human activity would result 	Same as Alternative C	Same as Alternative C

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
LCAS risk factor: Livestock grazing				
Some existing direction (INFISH, PACFISH) partially meets lynx conservation needs in most plans	<ul style="list-style-type: none"> ♦ Standard GRAZ S1 says grazing shall be managed to allow shrubs & trees to regenerate in fire- & harvest-created openings ♦ Standard GRAZ S2 says grazing shall be managed to ensure aspen propagation ♦ Standards GRAZ S3, GRAZ S4 & LINK S2 says grazing shall be managed to achieve seral stage distribution similar to historic patterns in wet areas, willows & shrub-steppe habitats 	Same as Alternative B	Same as Alternative B	Changes standards to guidelines, changing the requirements from imperative “shall” to less-restrictive “should”
LCAS risk factor: Oil & gas leasing				
Most FS & BLM plans contain limited or no direction	<ul style="list-style-type: none"> ♦ Standard HU S3 says motorized over-the-snow access for mineral & energy exploration & facilities shall be restricted to designated routes ♦ Guideline HU G4 encourages remote monitoring ♦ Guideline HU G5 encourages developing reclamation plans that improves lynx habitat 	Same as Alternative B	Same as Alternative B	Similar to Alternative B, only <ul style="list-style-type: none"> ♦ Changes Standard HU S3 to Guideline HU G12, changing the requirement from imperative “shall” to less-restrictive “should”
LCAS risk factor: Land ownership patterns				
Most FS & BLM plans contain limited or no direction	♦ Guideline LINK G1 encourages retaining FS & BLM lands in public ownership	Same as Alternative B	Same as Alternative B	Same as Alternative B

Comparing how the LCAS risk factors are addressed in the alternatives

Comparing how the alternatives affect lynx

Table 2-5. Comparing how the alternatives affect lynx

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effects on lynx: Effects of amendment (change in effects from Alternative A)				
<i>Individuals</i> No change	<i>Individuals</i> Beneficial effects; all risk factors fully addressed.	<i>Individuals</i> Beneficial effects; all risk factors substantially addressed.	<i>Individuals</i> Some beneficial effects; some risk factors related to denning and foraging habitat only partially addressed.	<i>Individuals</i> Some beneficial effects; some risk factors related to denning and foraging habitat only partially addressed.
<i>Populations</i> No change	<i>Populations</i> Beneficial effects; all risk factors fully addressed.	<i>Populations</i> Long-term beneficial effects; all risk factors substantially addressed.	<i>Populations</i> Some beneficial effects; some risk factors related to denning and foraging habitat only partially addressed.	<i>Populations</i> Some beneficial effects; some risk factors related to denning habitat only partially addressed.
Effects on lynx: Effects of plans as amended				
<i>Individuals</i> Adverse effects will continue.	<i>Individuals</i> Beneficial effects; all risk factors fully addressed.	<i>Individuals</i> Beneficial effects; all risk factors substantially addressed.	<i>Individuals</i> Some beneficial effects; may be some adverse effects over the short term; some risk factors related to denning and foraging habitat only partially addressed.	<i>Individuals</i> Some beneficial effects; may be some adverse effects over the short or long term; some risk factors related to denning and foraging habitat only partially addressed. Allowing fuel treatment projects may result in adverse effects.
<i>Populations</i> Adverse effects will continue.	<i>Populations</i> Beneficial effects; all risk factors fully addressed.	<i>Populations</i> Beneficial effects; all risk factors substantially addressed.	<i>Populations</i> Some beneficial effects; may be some adverse effects over the short term; some risk factors related to denning and foraging habitat only partially addressed.	<i>Populations</i> Some beneficial effects; may be some adverse effects over the short or long term; some risk factors related to denning and foraging habitat only partially addressed. Allowing fuel treatment projects may result in adverse effects.

<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effects on lynx:	Contributes to conserving species			
No	Yes	Yes	Partially Many standards contribute to conserving lynx but thinning allowances may result in adverse effects	Partially Many standards contribute to conserving lynx but vegetation standards that allow fuel treatment may result in adverse effects

Comparing how the alternatives affect lynx

Comparing how the alternatives affect other resources

Table 2-6. Comparing how the alternatives affect other resources

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effects on threatened, endangered and proposed species other than lynx			
All alternatives result in both limited reduction and improvement in habitat and are not likely to adversely affect listed or proposed species. Species include: <u>mammals</u> including grey wolf, grizzly bear and woodland caribou; <u>birds</u> including Mexican spotted owl; <u>fish</u> including bull trout, Chinook salmon, steelhead trout, bonytail chub, Colorado squaw fish, humpback chub, Kendall Warm Springs dace, razorback sucker, sockeye salmon, white sturgeon.			
Effects on sensitive species			
♦ All alternatives result in limited improvement in habitat for <u>mammals</u> including dwarf shrew and wolverine; <u>birds</u> including black-backed woodpecker, red-naped sapsucker, three-toed woodpecker, Williamson's sapsucker and white-headed woodpecker; and <u>amphibians</u> including boreal toad and northern leopard frog.			
♦ All alternatives result in both limited reduction and improvement in habitat and are not likely to adversely any sensitive species. Species include: <u>mammals</u> including fisher and marten; <u>birds</u> including boreal owl, great grey owl, merlin, northern goshawk, olive-sided flycatcher, and Swainson's thrush; <u>fish</u> including arctic grayling, Colorado River cutthroat trout, interior redband trout, ling, sicklefin chub, Snake River cutthroat trout, sturgeon chub, torrent sculpin, westslope cutthroat trout and Yellowstone cutthroat trout.			
♦ All alternatives may cause limited reduction in habitat for two bird species Golden-crowned kinglet and Hammond's flycatcher. The alternatives are not likely to adversely affect these species.			
Effects on management indicator species			
♦ All alternatives result in limited improvement in habitat for <u>mammals</u> including beaver, bobcat and moose; <u>birds</u> including blue grouse, downy woodpecker, hairy woodpecker, northern flicker, red-breasted nuthatch, ruby-crowned kinglet; three-toed woodpecker, yellow bellied sapsucker, yellow warbler			
♦ All alternatives result in both limited reduction and improvement in habitat and are not likely to adversely any species. Species include: <u>mammals</u> including black bear, elk, red squirrel, mule deer and white-tailed deer; <u>birds</u> including pileated woodpecker; <u>fish</u> including Bonneville cutthroat trout, brook trout, cutthroat trout, large mouth bass, rainbow trout, sculpin, trout; and <u>macro-invertebrates</u>			
Effects on fish & aquatics			
Negligible effect	Same as Alternative B	Same as Alternative B	Same as Alternative B
Effects on plants – threatened, endangered, proposed and sensitive species			
Beneficial or no effect to all species	Same as Alternative B	Same as Alternative B	Same as Alternative B

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effects on timber management			
<ul style="list-style-type: none"> ♦ May reduce opportunities for regeneration harvest where there are large areas of unsuitable habitat – about 13% of the LAUs exceed the 15% timber & 30% disturbance standards ♦ Could increase opportunities for regeneration harvest where foraging habitat is lacking ♦ Some projects may have to be deferred or locations changed where denning habitat is lacking, but denning habitat generally is not lacking 	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ Less likely that the amount of unsuitable habitat would constrain regeneration harvest ♦ Timber harvest in multistoried foraging habitat could be deferred or modified to avoid reducing habitat 	<p>Same as Alternative C, only</p> <ul style="list-style-type: none"> ♦ Some timber harvest could take place in multistoried foraging habitat, especially when it can be designed to maintain & improve forage conditions 	<p>Same as Alternative D, only</p> <ul style="list-style-type: none"> ♦ Timber harvest for fuel treatment would not be affected by any of the vegetation standards
Effects on range			
<p>Limited effects</p> <ul style="list-style-type: none"> ♦ In some cases, livestock management may need to be intensified or structural improvements added ♦ Most likely to affect grazing on units east of the Continental Divide without aquatic direction in existing plans 	<p>Same as Alternative B</p>	<p>Same as Alternative B</p>	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ May have fewer effects because standards changed to less-restrictive guidelines

Comparing how the alternatives affect other resources

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effects on developed winter recreation			
<ul style="list-style-type: none"> ♦ Would not preclude further development ♦ New ski areas & expansions would have to incorporate design measures to provide lynx habitat need ♦ Could affect timing of operations, where ski runs are located & costs associated with development 	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ Less likely to affect timing of ski area operations 	Same as Alternative C	Less than Alternative C
Effects on minerals			
<ul style="list-style-type: none"> ♦ No affect on availability ♦ Some potential to increase costs for mineral exploration & development 	Same as Alternative B	Same as Alternative B	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ May have fewer effects because standards changed to less-restrictive guidelines
Effects on highways			
<p>Little effect anticipated</p> <ul style="list-style-type: none"> ♦ Need to incorporate wildlife crossings in highway design, is already being done by state & federal agencies 	Same as Alternative B	Same as Alternative B	Same as Alternative B
Effects on forest roads			
<p>No restrictions on existing roads</p> <ul style="list-style-type: none"> ♦ New roads built in lynx habitat may be restricted to public use ♦ Upgrades to existing roads that result in increased traffic speeds or volumes are discouraged 	<p>Same as Alternative B, only</p> <ul style="list-style-type: none"> ♦ Where upgrades to existing roads result in increased traffic speeds or volumes, they may be allowed if designed to reduce effects on lynx 	Same as Alternative C	Same as Alternative C

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Effects on changing land ownership			
Limited effect on land exchanges	Same as Alternative B	Same as Alternative B	Same as Alternative B
♦ Discourages disposing of lynx habitat by exchanging it away			
♦ Lynx habitat could be acquired			
Effects on land uses			
Projects would need to maintain lynx habitat connectivity	Same as Alternative B	Same as Alternative B	Same as Alternative B
Economic effects from limiting precommercial thinning			
♦ Based on historic average funding, about 120 jobs/year could be reduced & labor income decreased by \$1.3 million/year	Same as Alternative B	♦ Based on historic average funding, about 70 jobs/year could be reduced & labor income decreased by \$800,000/year	Same as Alternative B
♦ Based on full funding, about 360 jobs/year could be reduced & labor income decreased by \$4 million/year		♦ Based on full funding, about 210 jobs/year could be reduced & labor income decreased by \$2.3 million/year	
Economic effects from limiting increases to groomed & designated over-the-snow routes			
No effect to the economy	Less than Alternative B	Same as Alternative C	Same as Alternative C
♦ Existing uses would continue			
♦ Some undesignated routes may see increased use			
♦ May be some local effects because outfitters cannot expand, but most cannot expand now			

Comparing how the alternatives affect other resources

<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Social effects			
<ul style="list-style-type: none"> ♦ Higher use on existing designated or groomed over-the-snow routes could occur, changing user experience ‡ ♦ Fewer employment opportunities due to decreases in precommercial thinning 	<ul style="list-style-type: none"> ♦ Over-the-snow user experience should not change as a result of Alternative C ♦ Fewer employment opportunities due to decreases in precommercial thinning 	<p>Same as Alternative C, only</p> <ul style="list-style-type: none"> ♦ Employment opportunities more like no-action alternative, Alternative A 	<p>Same as Alternative C</p>
Effects on environmental justice			
<ul style="list-style-type: none"> ♦ No effects to any minority or low-income population or community ♦ Input from all persons & groups has been considered 	<p>Same as Alternative B</p>	<p>Same as Alternative B</p>	<p>Same as Alternative B</p>
<p>‡ Grooming levels have been stable during the past five years & are not likely to increase during the next five, because the costs of machinery & grooming operations have increased, while the funding from the states to do grooming has not increased.</p>			

Comparing how the alternatives affect other resources
